In the Claims

Claims 1-67 remain in the application and are listed as follows:

1. (Previously Presented) A computing device comprising:

one or more processors;

memory operably associated with the one or more processors; and

a context service module loadable in the memory and executable by the one or more processors to receive context information from one or more context providers and process the information to determine a current device context by determining, from the context information, at least one node associated with the context information and traversing at least a portion of a hierarchical tree structure of which said at least one node comprises a part.

2. (Original) The computing device of claim 1 embodied as a mobile computing device.

3. (Original) The computing device of claim 1 embodied as a desktop computing device.

4. (Original) The computing device of claim 1, wherein the device comprises cache memory that maintains a current device context.

5. (Original) The computing device of claim 1, wherein the context service module is configured to automatically receive the context information from the context providers.

6. (Original) The computing device of claim 1, wherein the context service module is configured to automatically receive the context information from the context providers and, as the context of the computing device changes, process the information to determine a new current device context.

7. (Original) The computing device of claim 1, wherein the context service module is configured to request context information from one or more of the context providers.

8. (Original) The computing device of claim 1, wherein the context service module is configured to provide information concerning a current device context to one or more applications.

9. (Original) The computing device of claim 8, wherein the context service module is configured to receive a request from the one or more applications that request the current device context information.

10. (Original) The computing device of claim 1 further comprising a context provider interface associated with the context service module, the context provider interface comprising a common interface that is capable is receiving context information from multiple different context providers.

11. (Original) The computing device of claim 1 further comprising one or more application program interfaces (APIs) operably associated with the

context service module, the one or more APIs being callable by one or more applications to acquire information concerning the current device context.

12. (Original) The computing device of claim 1 further comprising one or more events that are configured for use by one or more applications so that the applications can register to receive information concerning a current device context responsive to the occurrence of one or more events.

13. (Previously Presented) A computing device comprising:

one or more processors;

memory operably associated with the one or more processors; and

a location service module loadable in the memory and executable by the one or more processors to receive location information from one or more location providers and process the information to determine a current device location by determining, from the location information, at least one node associated with the location information and traversing at least a portion of a hierarchical tree structure of which said at least one node comprises a part.

14. (Original) The computing device of claim 13 embodied as a mobile computing device.

15. (Original) The computing device of claim 13 embodied as a desktop computing device.

16. (Original) The computing device of claim 13, wherein the location service module is configured to automatically receive the location information from the location providers.

17. (Original) The computing device of claim 13, wherein the location service module is configured to automatically receive the location information from the location providers and, as the location of the computing device changes, process the information to determine a new current device location.

18. (Original) The computing device of claim 13, wherein the location service module is configured to request location information from one or more of the location providers.

19. (Original) The computing device of claim 13, wherein the location service module is configured to provide information concerning a current device location to one or more applications.

20. (Original) The computing device of claim 13, further comprising a location provider interface associated with the location service module, the location provider interface comprising a common interface that is capable is receiving location information from multiple different location providers.

21. (Original) The computing device of claim 13, further comprising one or more application program interfaces (APIs) operably associated with the

location service module, the one or more APIs being callable by one or more applications to acquire information concerning the current device location.

22. (Original) The computing device of claim 13, further comprising one or more events that are configured for use by one or more applications so that the applications can register to receive information concerning a current device location responsive to the occurrence of one or more events.

23. (Original) A computing device comprising:

one or more processors;

one or more computer-readable media;

at least one hierarchical tree structure resident on the media and comprising multiple nodes each of which represents a geographical division of the Earth; and

a location service module loadable in the memory and executable by the one or more processors to receive location information from one or more location providers and process the information to determine a current device location that comprises a node of the hierarchical tree structure.

24. (Original) The computing device of claim 23 embodied as a mobile computing device.

25. (Original) The computing device of claim 23 embodied as a desktop computing device.

26. (Original) The computing device of claim 23, wherein the location service module is configured to determine the current device location by traversing multiple nodes of the hierarchical tree.

27. (Original) The computing device of claim 23 further comprising another hierarchical tree structure resident on the media and comprising multiple nodes each of which represents a physical or logical entity, the location service module being configured to determine the current device location by traversing multiple nodes of the hierarchical trees.

28. (Original) The computing device of claim 23 further comprising:

another hierarchical tree structure resident on the media and comprising multiple nodes each of which represents a physical and/or logical entity; and

a link between nodes on the different trees,

the location service module being configured to determine the current device location by traversing multiple nodes of the hierarchical trees.

29. (Original) The computing device of claim 23, wherein the location service module is configured to provide information concerning a current device location to one or more applications for rendering location-specific services.

30. (Original) The computing device of claim 29, wherein the location service module is configured to receive calls from the one or more applications that request the information concerning the current device location.

31. (Original) The computing device of claim 29, wherein the location service module is configured to register one or more applications for notification of information concerning a current device location upon the occurrence of a definable event.

32. (Original) A computing device comprising:

one or more processors;

one or more computer-readable media;

at least one hierarchical tree structure resident on the media and comprising multiple nodes each of which represents a physical or logical entity; and

a location service module loadable in the memory and executable by the one or more processors to receive location information from one or more location providers and process the information to determine a current device location that comprises a node of the hierarchical tree structure.

33. (Original) The device of claim 32 embodied as a mobile computing device.

34. (Original) The device of claim 32 embodied as a desktop computing device.

35. (Original) The device of claim 32, wherein the hierarchical tree structure comprises an organization specific tree structure that has context only within a particular organization.

36. (Original) The device of claim 32 further comprising one or more services associated with one or more nodes of the hierarchical tree, the device comprising an application that is executing on the one or more processors to traverse the hierarchical tree to located the one or more service.

37. (Previously Presented) A location-aware computing system comprising:

one or more computing devices;

each computing device having a software architecture comprising:

a location provider interface that is configured to receive location information;

a location service module communicatively associated with the location provider interface and configured to receive the location information from the multiple different location providers and process the information to ascertain a current device location by determining, from the location information, at least one node associated with the location information and traversing at least a portion of a hierarchical tree structure of which said at least one node comprises a part; and

one or more application program interfaces (API) or events associated with the location service module and defining a mechanism through which information concerning a current device location can be provided to one or more applications that are configured to provide location-specific services.

38. (Original) The location-aware computing system of claim 37, wherein at least one of the one or more computing devices comprises a mobile computing device.

39. (Original) The location-aware computing system of claim 37, wherein at least one of the one or more computing devices comprises a desktop computing device.

40. (Original) The location-aware computing system of claim 37, wherein the location provider interface is configured to receive location information from multiple different location providers.

41. (Original) The location-aware computing system of claim 37, wherein the location provider interface is configured to receive location information from multiple different location providers, the location service module being configured to poll one or more of the location providers so that the polled location provider can provide location information to the location provider interface.

42. (Original) The location-aware computing system of claim 37 further comprising:

one or more computer-readable media; and

a hierarchical tree structure resident on the media and comprising multiple nodes each of which represent geographical divisional of the Earth, the location service module being configured to process the information to ascertain a current device location that comprises one node on the hierarchical tree structure.

43. (Original) The location-aware computing system of claim 42, wherein the location service module is configured to ascertain a current device location by traversing the hierarchical tree structure to a root of the tree structure.

44. (Original) The location-aware computing system of claim 42 further comprising one or more additional hierarchical tree structures resident on the media and comprising multiple nodes each of which represent physical or logical entities, the additional hierarchical trees each having at least one node that is linked with the first-mentioned hierarchical tree structure, the location service module being configured to ascertain a current device location by traversing at least one of the additional hierarchical trees and the first-mentioned hierarchical tree.

45. (Previously Presented) A computer-implemented method of determining a computing device context comprising:

receiving, with a computing device, information that pertains to a current context of the device;

processing the information on and with the device to ascertain the current context of the computing device by determining, from the information, at least one node associated with the information and traversing at least a portion of a hierarchical tree structure of which said at least one node comprises a part.

46. (Original) The computer-implemented method of claim 45, wherein said receiving comprises receiving the information with a mobile computing device.

47. (Original) The computer-implemented method of claim 45, wherein said receiving comprises receiving the information with a hand-held computing device.

48. (Original) The computer-implemented method of claim 45, wherein said receiving comprises receiving the information with a desktop computing device.

49. (Original) The computer-implemented method of claim 45, wherein the current context is the device location.

50. (Original) The computer-implemented method of claim 49, wherein the receiving of the information comprise receiving information from multiple different location providers.

51. (Original) The computer-implemented method of claim 50, wherein the information that is received from the multiple different location providers is received in different forms.

52. (Original) The computer-implemented method of claim 50, wherein the receiving of the information comprises receiving the information through a common interface.

53. (Original) The computer-implemented method of claim 45, wherein the receiving of the information comprise receiving information from multiple different context providers.

54. (Original) The computer-implemented method of claim 53, wherein the information that is received from the multiple different location providers is received in different forms.

55. (Original) The computer-implemented method of claim 53, wherein the receiving of the information comprises receiving the information through a common interface.

56. (Original) The computer-implemented method of claim 45 further comprising receiving a request from an application for information that pertains to the current context of the mobile computing device and returning at least some information to the application.

57. (Original) The computer-implemented method of claim 45 further comprising receiving at least one event registration from one or more applications that pertains to an event for which the application is to receive information pertaining to the current context of the computing device, and returning information pertaining to the current context of the computing device to the one or more applications responsive to the occurrence of an event.

58. (Previously Presented) One or more computer-readable media having computer-readable instructions thereon which, when executed by a computing device, cause the computing device to:

receive information that pertains to a current location of the device, the information being received from multiple different location providers; and

process the information to map the information to a node of a hierarchical tree structure that comprises multiple nodes that represent either (1) geographical divisions of the Earth or (2) physical or logical entities; and

traverse the hierarchical tree structure to ascertain the current device location.

59. (Original) A computer-implemented method of determining the location of a hand-held, mobile computing device comprising:

maintaining a hierarchical tree structure on the mobile computing device, the tree structure comprising multiple nodes each of which represent geographical divisions of the Earth;

receiving information from multiple different location providers that describe aspects of a current device location;

processing the information with the mobile device to ascertain a node on the tree structure that likely constitutes a current device location; and

traversing at least one other node of the tree structure to ascertain additional location information that is associated with the current device location.

60. (Original) The computer-implemented method of claim 59, wherein:

the maintaining of the hierarchical tree structure comprises maintaining multiple hierarchical tree structures that are linked with one another; and

the traversing comprises traversing the multiple hierarchical tree structures to ascertain the additional location information.

61. (Original) The computer-implemented method of claim 60, wherein one tree structure comprises a unique representation of a physical or logical entity.

62. (Original) The computer-implemented method of claim 59 further comprising receiving a request from one or more applications for information that pertains to a current device location and providing the one or more applications with the information that pertains to the current device location.

63. (Original) The computer-implemented method of claim 62, wherein the receiving of the request comprises receiving a call to an application program interface (API).

64. (Original) The computer-implemented method of claim 62, wherein the receiving of the request comprises receiving an event registration.

65. (Original) The computer-implemented method of claim 62 further comprising applying a security policy to the information that pertains to the current device location before providing the information to the one or more applications.

66. (Original) The computer-implemented method of claim 59 further comprising before processing the information to ascertain a node, resolving any conflicts that might exist between information that is received from different location providers.

67. (Original) One or more computer-readable media having computer-readable instructions thereon which, when executed by a computing device, cause the computing device to:

maintain or access a hierarchical tree structure on or with the computing device, the tree structure comprising multiple nodes each of which represent geographical divisions of the Earth;

receive information from multiple different location providers that describe aspects of a current device location;

process the information with the device to ascertain a node on the tree structure that likely constitutes a current device location;

traverse at least one other node of the tree structure to ascertain additional location information that is associated with the current device location;

receive one or more calls from one or more applications for information that pertains to a current device location, the applications being configured to render location-specific information; and

supply at least some information that pertains to the current device location to the one or more applications.